

CLAIMS:

1. A connector panel for a housing of the type having an opening for accommodating interchangeable electronic cards therein and having shielding from electromagnetic impulses, said connector panel comprising:

a printed circuit board body with a conductive plane;

a card connector on said panel adapted for being connected to an electronic card in the housing;

at least one input/output connector on a first surface of said panel, said input/output connector being connected to said card connector by a printed circuit of said printed circuit board body and adapted for being connected to an input/output of a peripheral device; and

said connector panel adapted for being mounted side by side and in shielding connection with similar ones of said connector panel to cover the opening of the housing so as to maintain the shielding of the housing.

2. The connector panel according to claim 1, wherein said connector panel has a first lateral surface and a second lateral surface, said first lateral surface having a longitudinal channel for receiving therein a conductive gasket, so as to establish an electromagnetic shielding connection between said first lateral surface of said connector panel and an adjacent second lateral surface of a similar one of said connector panel.

3. The connector panel according to claim 2, wherein said second lateral surface of said connector panel is convex so as to facilitate a positioning of a similar one of said connector panel in side-by-side relationship therewith.

4. The connector panel according to claim 3, wherein the printed circuit board body has an elongated rectangular shape.

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5. The connector panel according to claim 2, wherein the printed circuit board body consists of at least three micro-panel layers.

6. The connector panel according to claim 5, wherein the longitudinal channel is defined by a middle one of said three micro-panel layers being set back from outer ones of said three micro-panel layers.

7. The connector panel according to claim 2, wherein said conductive gasket is resilient.

8. The connector panel according to claim 1, wherein the printed circuit board body has a first surface and a second surface, the card connector being on said first surface and the input/output connector being on said second surface.

9. The connector panel according to claim 1, wherein said connector panel has at least one alignment slot therein for being aligned when mounted to cover the opening of the housing so as to ensure an electromagnetic shielding connection between adjacent ones of said connector panel.

10. The connector panel according to claim 9, wherein said connector panel as a throughbore for being fastened to the housing.

11. The connector panel according to claim 1, wherein the connector panel has five vertically aligned BNC-connectors for a housing of EIA Regulation RS-310-C standards.

12. A housing adapted for receiving electronic cards therein, said housing comprising:

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a chassis shielded from electromagnetic interference and having an opening in a face thereof, said chassis adapted for receiving electronic cards therein; and

at least two connector panels each having a printed circuit board body with a conductive plane, a card connector adapted for being connected to at least one electronic card in the housing, at least one input/output connector on said connector panel, each said input/output connector being connected to said card connector by a printed circuit of said printed circuit board body, each said input/output connector adapted for being connected to an input/output of a peripheral device;

wherein said connector panels are adapted for being mounted side by side and in shielding connection to cover the opening of the chassis so as to maintain an electromagnetic interference shielding of the housing.

13. The housing according to claim 12, wherein each said connector panel has a first lateral surface and a second lateral surface, said first lateral surface having a longitudinal channel adapted for receiving therein a conductive gasket, so as to establish an electromagnetic shielding connection between said first lateral surface of a first of said connector panels and an adjacent second lateral surface of a second of said connector panels.

14. The housing according to claim 13, wherein said second lateral surface of each said connector panel is convex so as to facilitate a positioning of an adjacent one of said connector panels in side-by-side relationship therewith.

15. The housing according to claim 14, wherein the printed circuit board body of each said connector panel has an elongated rectangular shape.

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16. The housing according to claim 12, wherein the printed circuit board body of each said connector panel consists of at least three micro-panel layers.

17. The housing according to claim 16, wherein the longitudinal channel of each said connector panel is defined by a middle one of said three micro-panel layers being set back from outer ones of said three micro-panel layers.

18. The housing according to claim 13, wherein said conductive gasket is resilient.

19. The housing according to claim 12, wherein the printed circuit board body has a first surface and a second surface, the card connector being on said first surface and the input/output connector being on said second surface.

20. The housing according to claim 19, wherein electronic cards received in the chassis are positioned so as to be generally perpendicular to said first surfaces of said connector panels, such that said card connectors of said connector panels connect to the electronic cards when said connector panels are mounted to the chassis.

21. The housing according to claim 12, wherein the chassis is a conductive cast shell.

22. The housing according to claim 12, wherein each said connector panel has at least one alignment slot therein for engagement with a corresponding protrusion in the chassis, for aligning said connector panels when mounted to cover the opening of the chassis so as to ensure an electromagnetic shielding connection between adjacent ones of said connector panel.

23. The housing according to claim 22, wherein said connector panels each have at least one alignment slot on an

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upper edge thereof and at least one alignment slot on a lower edge thereof, for engagement with corresponding protrusions on upper and lower inner surfaces of the chassis.

24. The housing according to claim 23, wherein each said connector panel has a throughbore for being fastened to a tapped hole in the chassis registered with said throughbore.

25. The housing according to claim 12, wherein the chassis has a groove for receiving therein an edge portion of said connector panels, such that a connector panel being mounted to the chassis is introduced in said groove and pivoted into connection with a corresponding electronic card.

26. The housing according to claim 25, wherein said groove receives an upper edge portion of said connector panels introduced therein.

27. The housing according to claim 25, wherein said groove has protrusions therein and each said connector panel has at least one alignment slot on an upper edge thereof for engagement with a corresponding protrusion in said groove of the chassis, for aligning said connector panels when mounted to cover the opening of the chassis so as to ensure an electromagnetic shielding connection between adjacent ones of said connector panel.

28. The housing according to claim 27, wherein said connector panels further comprise at least one alignment slot on an lower edge thereof, for engagement with corresponding protrusions on a lower inner surface of the chassis.

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29. The housing according to claim 28, wherein each said connector panel has a throughbore for being fastened to a tapped hole in the chassis registered with said throughbore.

30. The housing according to claim 29, wherein the chassis is a conductive cast shell with said groove and said protrusions being integrally formed in the chassis.

31. The housing according to claim 12, wherein the connector panel has five vertically aligned BNC-connectors for a housing of EIA Regulation RS-310-C standards.

32. A chassis for a housing of the type accommodating interchangeable electronic cards therein, said chassis comprising a conductive cast shell having an electronic card support structure integrally formed therewith for supporting electronic cards therein in a predetermined position, said electronic cards being slid into said predetermined position in said shell, said shell having at least a front opening for receiving therethrough said electronic cards, said front opening being closeable by a front panel, a rear face of said chassis having connectors for interfacing peripherals with said electronic cards received in said chassis and supported by said electronic card support structure in said predetermined position, first card connectors connecting each said electronic card in said predetermined position to at least a controller, said first card connectors being positioned so as to be connected with said electronic cards in said predetermined position, said shell forming with said front panel and said rear face a housing shielded from electromagnetic interference.

33. The chassis according to claim 32, wherein said electronic card support structure consists in integrally formed grooves in upper and lower inner surfaces of said shell, each electronic card being received in one of said

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grooves in said upper inner surface and in one of said grooves of said lower inner surface, so as to be perpendicular to said upper and lower inner surfaces when in said predetermined position.

34. The chassis according to claim 33, wherein said connectors on said rear face include second card connectors on an inner surface of said rear face, said second card connectors being positioned so as to be connected to a corresponding one of said electronic cards in said predetermined position.

35. The chassis according to claim 34, wherein said rear face comprises individual connector panels in side by side relationship with one another, said chassis comprising a connector panel support structure for supporting connector panels such that said connector panels are connected to said electronic cards in said predetermined position, whereby said electronic cards are connected to peripherals through said connector panels.

36. The chassis according to claim 35, wherein said connector panels each have a printed circuit board body with a conductive plane, one of said card connectors positioned for being connected to a corresponding one of said electronic cards in said predetermined position, at least one peripheral connector on an outer surface thereof, each said peripheral connector being connected to said second card connector by a printed circuit of said printed circuit board body, each said peripheral connector adapted for being connected to an input/output of a peripheral device; wherein said connector panels are adapted for being mounted side by side and in shielding connection to cover the opening of the chassis so as to maintain an electromagnetic interference shielding of the housing.

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37. The chassis according to claim 36, wherein each said connector panel has a first lateral surface and a second lateral surface, said first lateral surface having a longitudinal channel adapted for receiving therein a conductive gasket, so as to establish an electromagnetic shielding connection between said first lateral surface of a first of said connector panels and an adjacent second lateral surface of a second of said connector panels.

38. The chassis according to claim 33, wherein said first card connectors are on a board connector which is received in a second groove perpendicular to said grooves on said lower inner surface of said electronic card support structure.

39. The chassis according to claim 35, wherein each said connector panel has at least one alignment slot therein for engagement with a corresponding protrusion integrally formed in the chassis, for aligning said connector panels so as to ensure an electromagnetic shielding connection between adjacent ones of said connector panel.

40. The chassis according to claim 39, wherein said connector panels each have at least one alignment slot on an upper edge thereof and at least one alignment slot on a lower edge thereof, for engagement with corresponding protrusions integrally formed on upper and lower inner surfaces of the chassis.

41. The chassis according to claim 40, wherein each said connector panel has a throughbore for being fastened to a tapped hole in the chassis registered with said throughbore.

42. The chassis according to claim 35, wherein the chassis has a rear groove for receiving therein an edge portion of said connector panels, such that a connector

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panel being mounted to the chassis is introduced in said rear groove and pivoted into connection with a corresponding electronic card.

43. The chassis according to claim 42, wherein said rear groove receives an upper edge portion of said connector panels introduced therein.

44. The chassis according to claim 43, wherein said rear groove has protrusions therein and each said connector panel has at least one alignment slot on an upper edge thereof for engagement with a corresponding protrusion in said groove of the chassis, for aligning said connector panels when mounted to cover the rear face of the chassis so as to ensure an electromagnetic shielding connection between adjacent ones of said connector panel.

45. The chassis according to claim 44, wherein said connector panels further comprise at least one alignment slot on an lower edge thereof, for engagement with corresponding protrusions on a lower inner surface of the chassis.

46. The chassis according to claim 45, wherein each said connector panel has a throughbore for being fastened to a tapped hole in the chassis registered with said throughbore.

47. The chassis according to claim 32, wherein said shell is in a die cast metal.

48. The chassis according to claim 47, wherein said shell is cast into an upper shell portion and a lower shell portion.

49. The chassis according to claim 32, wherein said front panel is displaceable between an operative position,

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wherein said front panel covers said front opening of said chassis during operation of said chassis, and an insertion position, wherein said front panel is pivoted away from said front opening such that said electronic cards in said chassis can be accessed.

50. The chassis according to claim 49, wherein said front panel is connected to said chassis by at least a pair of resilient pivot arms, said front panel in said insertion position being removable from said chassis by bending said resilient pivot arms to retract said resilient pivot arms out of said chassis.

51. The connector panel according to claim 35, wherein the connector panel has five vertically aligned BNC-connectors for a housing of EIA Regulation RS-310-C standards.

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